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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Eduard Erhardt

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EXAMINER

PATEL, CHIRAG R

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/600,643	<b>Applicant(s)</b> ERHARDT, EDUARD	
	<b>Examiner</b> CHIRAG R. PATEL	<b>Art Unit</b> 2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

Applicant's arguments filed May 3, 2010 have been fully considered but they are not persuasive.

Applicants argue, the local and the remote storage facility are not the same as redundant computers. Applicants raises a question whether the resynchronization process is a redundant operation in which work results are compared.

Examiner asserts that the Ofek discloses in the abstract, "second system, physically separated from the first system, includes a data facility that normally mirrors the data in the first system." Therefore the computers are redundant. Ofek clearly discloses per Col 3 lines 56-60, "to provide a computer system that enables redundant storage at a remote data facility and incorporates a provision for backup into an independent media at that remote data facility" The resynchronizes compares the vector to determine if a change has been detected to the data, vector is 0 , no change to data, or 1- there is a change to the data, and resynchronizes to maintain a redundant storage or mirror if the vector is 1, (See Col 11 lines 8-32)

Applicants argue that there are no first and second computers separate from the data communication network, and that it is unclear whether the examiner is changing his definition of the first and second computer.

Examiner points out Ofek discloses per Col 12 lines 29-57, "Other systems like the remote system 11 could connect to the local system 10 by separate remote link detectors and communications links" This clearly shows that the links are separate from the data communications network and the connections are independent of the

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computer-to-network connection. In response to applicant's clarity whether the Examiner is changing his definition of the first and second computer, examiner point to Ofek where it discloses a first, second and a third system per Col 11 lines 45-55, "As previously indicated it is possible to modify the network shown in FIG. 1 by adding a third and even a fourth system interconnected through corresponding communications links. The interconnection of three systems could then provide a first system like the local system 10 dedicated to process OLTP or other priority applications, a second remote system like the remote system 11 operating as a mirror and as a mechanism for performing point-in-time backups, and a third system that always operates to provide a second mirror of the data in the first system. Alternatively, the third system could also be adapted for running other applications."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 and 8-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek (US 6,549,921) in view of Touboul (US 6,480,962).

As per claim 1, Ofek discloses a computer system connected to a data communications network, said system comprising:

a first computer; (Col 4 lines 1-22; first data storage facility)

a second, redundant computer that is independent of the first computer; (Col 4 lines 1-22; second data storage facility)

a computer-to-computer connection between the first computer and the second computer (Figure 1: items: 30 and 33 )enabling the first computer is configured to match with the second computer by comparing a first work result of the first computer with a second work result of the second computer; (Col 7 line 64-Col 8 line 10; Col 10 line 66-Col 11 line 31; Figure 6: item 101: both local and remote system generate a status (work result) of the corresponding track; Figure 6: items 102, 106 performs the comparison process of the 1<sup>st</sup> and 2<sup>nd</sup> work result; Fig. 6: item 110 ; Col 11 lines 28-32, resynchronizes system based on value of the vector) and

at least one computer-to-network connection to connect both the first and second computers to the data communications network independent from the computer-to-computer connection so that (Col 5 lines 44-51) receipt of any data from the data communications network is limited to the first computer; (Col 3 lines 65-67; provide a method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site)

and transmission of any data to the data communications network is limited to the second computer; (Col 3 lines 56-60; second disk storage facility for operating normally as a mirror for the first disk storage facility)

wherein at least an initial processing of the data received from the data communications network is limited to the first computer; and (Col 8 lines 17-29; For purposes of this description, it is assumed that the host system 13 issues a Channel Control Word (CCW) command including all the necessary parameters from which the system can transfer a data block to or from a particular location in the storage device sets 15 and 16. Other operating systems use other procedures.)

Ofek fails to disclose wherein the first computer is configured to convert, transmit to and store in the second computer non-verified or non-verifiable data received by the first computer only in non-processable form. Touboul discloses converting non-verified or non-verifiable data received by the first computer in non-processable form. (Col 6 lines 4-21) At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to convert, transmit to and store in the second computer non-verified or non-verifiable data received by the first computer only in non-processable form in the disclosure of Ofek. The motivation for doing so would have been to protect clients from hostile downloadables. (Col 2 lines 24-31)

As per claim 2, Ofek / Touboul disclose the method of claim 1. Ofek discloses further the computer system as claimed in claim 1, wherein the first computer is configured to verify the received data in the first computer, and wherein the first computer is configured to supply only verified data to the second computer in processable form. (Col 10 line 66-Col 11 line 20)

As per claim 3, Ofek / Touboul disclose the computer system as claimed in claim

1. Ofek discloses wherein the first computer and the second computer are configured to independently verify the received data, and wherein only matching verified data are stored in the second computer in processable form. (Col 11 lines 20-27)

As per claim 4, Ofek / Touboul disclose the computer system as claimed in claim

1. Ofek discloses further comprising: a central data memory, (Col 7 lines 5-16)

wherein direct access to internal data of the computer system contained in a central data memory is limited to the second computer; and (Col 4 lines 23-41)

wherein the first computer is configured to receive the internal data only upon request via the second computer. (Col 7 lines 5-16)

As per claims 5 and 21, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses further comprising the computer system as claimed in claim 1, further comprising: an independent, redundant third computer; and (Col 11 lines 45-67)

wherein the second computer is configured to match with the third computer by comparing the second work result of the second computer with a third work result of the third computer. (Col 7 line 64-Col 8 line 10; Col 10 line 66-Col 11 line 20)

As per claim 6, Ofek discloses a method, comprising:

producing a first work result representing the verified data; (Col 7 line 64-Col 8 line 10)

forwarding the verified data in processable form and the non-verified data in the non-processable form from the first computer to a second computer; (Col 3 lines 65-67; provide a method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site) via a computer-to-computer connection (Figure 1: items 30, 33)

in the second computer, independently verifying the verified data forwarded from the first computer and producing a second work result based on the independent verification; comparing the first work result with the second work result; (Col 7 line 64 – Col 8 line 10; Col 10 line 66-Col 11 line 20; resynchronizes system based on valid bit patterns (work result) of local and remote system)

if the first work result and the second work result match, storing the verified data in the second computer, (Col 11 lines 28-32) and limiting receipt of any data from the data communication network to the first computer and (Col 3 lines 65-67; provide a method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site)

limiting transmission of any data to the data communications network to the second computer. (Col 3 lines 56-60; second disk storage facility for operating normally as a mirror for the first disk storage facility) via at least one computer-to-network connection independent of the computer-to-computer connection (Col 5 lines 44-51)

Ofek fails to disclose in a first computer, classifying data received from a data communications network as verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. Touboul discloses in a



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first computer , classifying data received from a data communications network as verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. (Col 6 lines 4-21) At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to disclose in a first computer , classifying data received from a data communications network as verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. The motivation for doing do would have been to protect clients from hostile downloadables. (Col 2 lines 24-31)

As per claim 8, Ofek / Touboul disclose the method of claim 6. Ofek discloses wherein only the second computer directly accesses internal data contained in a central data memory, and wherein the first computer indirectly accesses the internal data only upon request via the second computer. (Col 7 lines 5-16)

As per claim 9, Ofek / Touboul disclose the method of claim 6. Ofek discloses the method of claim 6, further comprising matching the second work result of the second computer with a third work result of a third computer. ( Col 7 line 64-Col 8 line 10; Col 10 line 66-Col 11 line 20; Col 11 lines 56-67)

As per claims 10 and 16, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses wherein connection between the first computer and the second computer forms an internal network of the computer system and wherein the

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data communications network is an external network with respect to the computer system. (Col 1 lines 44-51, Col 3 lines 44-54)

As per claim 11, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses wherein the first computer independently verifies the received data producing the first work result and wherein the second computer independently verifies the received data producing the second work result. (Col 7 line 64 – Col 8 line 10)

As per claim 12, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses wherein data processed by the first computer produces the first work result and wherein data processed by the second computer produces the second work result. (Col 7 line 64-Col 8 line 10)

As per claim 13, Ofek / Touboul disclose the computer system as claimed in claim 12. Ofek discloses wherein the first and second work results are produced by executing at least one of horizontal parity checks and parallel balancing. (Col 10 line 66-Col 11 line 20)

As per claims 14 and 19, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses wherein said matching by the first computer with the second computer is performed at an end of a program or when memory is being accessed. (Col 4 lines 1-22; Upon completion of the backup operation, the copy program is enabled to copy data blocks from the first data storage facility to the second data storage facility corresponding to the recorded identifications thereby reestablishing the second data storage facility as a mirror of the first data storage facility)

As per claims 15 and 20, Ofek / Touboul disclose the computer system as claimed in claim 1. Ofek discloses wherein all of the initial processing is performed by the first computer. (Col 4 lines 1-22)

As per claim 17, Ofek / Touboul disclose the method as claimed in claim 6. Ofek discloses wherein the first computer independently verifies the received data producing the first work result and wherein the second computer independently verifies the received data producing the second work result. (Col 7 line 64-Col 8 line 10)

As per claim 18, Ofek / Touboul disclose the method as claimed in claim 6. Ofek discloses wherein data processed by the first computer produces the first work result and wherein data processed by the second computer produces the second work result. (Col 7 line 64 – Col 8 line 10)

As per claim 22, Ofek / Touboul disclose the method as claimed in claim 21.

Ofek discloses wherein only the second and third computers have access to internal data of the computer system and wherein the third computer is configured to implement operation and monitoring of an automation system. (Col 7 lines 17-25)

As per claim 25, Ofek discloses a method, comprising:

producing a first work result representing the verified data; (Col 7 line 64-Col 8 line 10)

forwarding the verified data in processable form and the non-verified data in the non- processable form from the first computer to a second computer; (Col 3 lines 65-67; provide a method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site) via a computer-to-computer connection (Figure 1: items 30, 33)

in the second computer, independently verifying the verified data forwarded from the first computer and producing a second work result based on the independent verification; comparing the first work result with the second work result; (Col 7 line 64 – Col 8 line 10; Col 10 line 66-Col 11 line 20; resynchronizes system based on valid bit patterns (work result) of local and remote system)

if the first work result and the second work result match, storing the verified data in the second computer, (Col 11 lines 28-32) and limiting receipt of any data from the data communication network to the first computer and (Col 3 lines 65-67; provide a

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method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site)

limiting transmission of any data to the data communications network to the second computer. (Col 3 lines 56-60; second disk storage facility for operating normally as a mirror for the first disk storage facility) via at least one computer-to-network connection independent of the computer-to-computer connection (Col 5 lines 44-51)

wherein receipt of any data from the data communication network is limited to the first computer ((Col 3 lines 65-67; provide a method and apparatus for backing up data in a remote data facility that is fully transparent to operations at a local site) and wherein transmission of any data to the data communications network is limited to the second computer, and (Col 3 lines 56-60; second disk storage facility for operating normally as a mirror for the first disk storage facility)

wherein data received from the data communications network and data transmitted to the data communications network are limited without otherwise limiting forwarding of verified data in processable form and non-verified data in the non-processable form, (Col 3 lines 55-67) from the first computer to the second computer. (Figure 1: items 30, 33)

Ofek fails to disclose in a first computer , classifying data received from a data communications network as verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. Touboul discloses in a first computer , classifying data received from a data communications network as

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verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. (Col 6 lines 4-21) At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to disclose in a first computer, classifying data received from a data communications network as verified data and non-verified data, converting the non-verified data into a non-processable form by the first computer. The motivation for doing so would have been to protect clients from hostile downloadables. (Col 2 lines 24-31)

Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek (US 6,549,921) / Touboul (US 6,480,962) further in view of Rowen et al. - hereinafter Shirley (US 6,567,869)

As per claims 23 and 24. Ofek / Touboul disclose the computer system as claimed in claim 5. Ofek fails to disclose wherein user inputs are supplied via a keyboard or a mouse in parallel to the first computer, the second computer and the third computer. Shirley discloses wherein user inputs are supplied via a keyboard or a mouse in parallel to the first computer, the second computer and the third computer. (Col 2 line 56-Col 3 line 11, Figure 1) At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify Ofek to disclose wherein user inputs are supplied via a keyboard or a mouse in parallel to the first computer, the second computer and the third computer. The motivation would have been to control multiple computers using a single keyboard and mouse. (Col 2 line 56-Col 3 line 11)

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references are disclosed in the Notices of References cited page and teach numerous ways of \*\*\*\*. A close review of these references is recommended.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag R Patel whose telephone number is (571)272-7966. The examiner can normally be reached on Monday to Friday from 8:00AM to 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached on (571) 272-1915.

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The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://paired.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

/C. R. P./  
Examiner, Art Unit 2454

/NATHAN FLYNN/  
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